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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,779	07/22/2003	Robert W. Jewell	200209507-1	6785

22879 7590 07/08/2005

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EXAMINER	
MORRISON, THOMAS A	
ART UNIT	**PAPER NUMBER**
3653	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/624,779	JEWELL, ROBERT W.	
	Examiner	Art Unit	
	Thomas A. Morrison	3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) *17,18 and 27-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 19-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/22/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II (Claims 1-16 and 19-26 in the reply filed on June 9, 2005 is acknowledged. The traversal is on the ground(s) that (1) the claims of Group I are not believed to be distinct from the claims of Group II; and that (2) no examples have been provided to recite the material differences. This is not found persuasive because the processes set forth in claims 17-18 and 27-28 can be practiced by another materially different apparatus. For example, the processes set forth claims 17-18 and 27-29 can be performed using an apparatus that includes a braking mechanism and at least one conveying mechanism, in which the braking mechanism holds a first portion of a sheet of media while the at least one conveying mechanism rotates the sheet of media about the braking mechanism and into contact with the registration wall. Such exemplary apparatus is materially different from the apparatus set forth in claims 1-16 and the apparatus set forth in claims 19-26.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 and 19-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, this claim recites "a plurality of media carriers" and then recites "a media carrier". It is unclear how many different media carriers are claimed. It the recited "a media carrier" the same or different from the previously recited "a plurality of media carriers"?

Also, there is insufficient structure recited for the media carriers in claim 1, to understand how the print media is moved at a speed based on positions of the media carriers relative to the wall. Also, there does not appear to be means plus function language used in claim 1. As such, it is unclear what structure each of the media carriers has that performs the recited function.

Regarding claim 3, it is unclear how many different media carriers are claimed. Are the media carriers set forth in claim 3 different from the previously recited media carriers set forth in claim 1?

Claim 6 recites the limitation "the first belt" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the second belt" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the second speed" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the first speed" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 9, it is unclear how many different media carriers are claimed. Is the media carrier set forth in claim 9 different from the previously recited media carriers set forth in claim 1?

Regarding claim 10, this claim recites "a plurality of media carriers" and then recites "an adjacent media carrier". It is unclear how many different media carriers are claimed. It the recited "an adjacent media carrier" the same or different from the previously recited "a plurality of media carriers"?

Claim 12 recites the limitation "the first and second media carriers" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Also, there is insufficient structure recited for the first and second media carriers in claim 12, to understand how the sheet of media is steered towards the wall. Also, there does not appear to be means plus function language used in claim 12. As such, it is unclear what structures the first and second media carriers have that performs the recited function.

Regarding claim 19, there is insufficient structure recited for the first and second media carriers in claim 19, to understand how the print media is moved towards the registration wall upon concurrently engaging the print media. Also, there does not appear to be means plus function language used in claim 19. As such, it is unclear what structures the first and second media carriers have that performs the recited function.

Regarding claim 24, it is unclear how many belts are claimed. Does each of the first and second media carriers include at least one belt? Is there at least one belt for both of the first and second media carriers?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5, 10, 12-13, 19-23 and 25-26, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5697609 (Williams et al.). In particular, the Williams et al. patent discloses all of the limitations of claims 1, 3, 5, 10, 12-13, 19-23 and 25-26.

Regarding claim 1, Fig. 4 shows a media registration mechanism for aligning print media (11) in an image forming device (Abstract), the mechanism including

a registration wall (near 132);

a plurality of media carriers (114 and 116) configured parallel to each other and parallel to the registration wall (near 132), each of the plurality of media carriers (114 and 116) being positioned a different distance from the registration wall (near 132) and configured to move print media (11) in a direction along the registration wall (near 132); and

each of the plurality of media carriers (114 and 116) being configured to move the print media (11) at a speed based on a position of a media carrier relative to the registration wall (near 132) to cause the print media (11) to rotate towards and align against the registration wall (near 132). See also column 8, lines 1-40.

Regarding claim 3, inherently a media carrier (116) positioned closer to the registration wall (near 132) is configured to move the print media (11) at a slower speed than another media carrier (114) positioned farther away from the registration wall (near 132). More specifically, Fig. 4 clarifies that the media carriers (114 and 116) operate at different speeds (V_1 and V_2, respectively). With both media carriers (114 and 116) being parallel to the registration wall (near 132), inherently the media carrier (116) has to operate at a slower speed than the media carrier (114) to cause the media (11) to be registered at the registration wall (near 132). See also column 8, lines 1-40.

Regarding claim 5, inherently there is a drive means coupled to the plurality of media carriers (114 and 116) in order to driving the plurality of media carriers (114 and 116) at the different disclosed speeds (V_1 and V_2).

Regarding claim 10, Fig. 4 shows a media steering mechanism for positioning a sheet of media (11) prior to imaging (Abstract), the mechanism including

a fence (near 132);

a plurality of media carriers (114 and 116), each of the media carriers (114 and 116) configured to move the sheet of media (11) in a direction substantially parallel to

the fence (near 132), each of the media carriers (114 and 116) being offset a different distance from the fence (near 132) in one direction; and

a drive mechanism (inherent) for driving each of the media carriers (116) at a speed (V_2) less than an adjacent media carrier (114) that is positioned a greater distance away from the fence (near 132) such that the sheet of media (11) is steered towards the fence (near 132) to cause an edge of the sheet of media (11) to contact the fence (near 132). See also column 8, lines 1-40 and Figs. 3-4.

Regarding claim 12, the Abstract and Fig. 4 disclose an image forming device (Abstract) including

a media registration mechanism having a wall (near 132),

a first media carrier (116) oriented substantially parallel to and spaced a first distance apart from the wall (near 132),

at least a second media carrier (114) oriented substantially parallel to and spaced a second distance apart from the wall (near 132), the first and second media carriers (114 and 116) being configured to steer a sheet of media (11) towards the wall (near 132) when the first and second media carriers (114 and 116) are driven at different speeds (V_1 and V_2); and

an image forming mechanism (e.g., column 1, lines 1-33) configured to form an image onto the sheet of media (e.g., 11) once received from the media registration mechanism.

Regarding claim 13, the media registration mechanism inherently has a drive mechanism coupled to the first and second media carriers (114 and 116) for driving the first media carrier (116) at a first speed (V_2) and the second media carrier (114) at a second speed (V_1) greater than the first speed (V_2) of the first media carrier (116). See also column 8, lines 1-40 and Fig. 4).

Regarding claim 19, Fig. 4 shows an image forming device having a media registration mechanism for aligning print media (11) along a registration wall (near 132), the mechanism including

a first media carrier (116) configured to move print media (11) in a direction substantially parallel to the registration wall (near 132);

a second media carrier (114), positioned adjacent to the first media carrier (116), configured to move the print media in the direction substantially parallel to the registration wall (near 132); and

the first and second media carriers (116 and 14) configured to cause the print media (11) to move towards the registration wall (near 132) upon concurrently engaging the print media (11), until a side of the print media (11) contacts and aligns along the registration wall (near 132). See also column 8, lines 1-40.

Regarding claim 20, Fig. 4 shows that the first media carrier (116) is configured to move the print media (11) at a first speed (V_2) and the second media carrier (114) is configured to move the print media (11) at a second speed (V_1) different from the first speed (V_2).

Regarding claim 21, the first media carrier (116) is positioned between the second media carrier (114) and the registration wall (near 132) and wherein the first speed (V_2) is less than the second speed (V_1). More specifically, Fig. 4 clarifies that the media carriers (114 and 116) operate at different speeds (V_1 and V_2, respectively). With both media carriers (114 and 116) being parallel to the registration wall (near 132), inherently the media carrier (116) has to operate at a slower speed than the media carrier (114) to cause the media (11) to be registered at the registration wall (near 132). See also column 8, lines 1-40.

Regarding claim 22, Fig. 4 shows that the first media carrier (116), the second media carrier (114) and the registration wall (near 132) are substantially parallel to each other.

Regarding claim 23, Fig. 4 shows that the first media carrier (116) is positioned between the second media carrier (114) and the registration wall (near 132) and being configured to cause a drag in the movement of the print media (11) relative to the second media carrier (114). In particular, this is required for the media (11) to be registered against the registration wall (near 132).

Regarding claim 25, inherently there is a drive means for moving the first media carrier (116) at a first speed (V_2) and for moving the second media carrier (114) at a second speed (V_1) different than the first speed (V_2).

Regarding claim 26, Fig. 4 shows at least a third media carrier (106) adjacent to the first and second media carriers (116 and 114).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Williams et al. patent. The Williams et al. patent discloses a registration device for high speed printing machines. See column 1, lines 1-7. Also, the Williams et al. patent discloses that the registration device can be used in an electrophotographic printing machine, but the Williams et al. patent does not specifically mention a liquid electrophotographic mechanism. It would have been obvious to one of ordinary skill in the art at the time of the invention, to provide the Williams et al. apparatus in a printer that includes a liquid electrographic mechanism, since the Williams et al. apparatus can be used in several types of high speed printing machines, including electrographic printing machines that have liquid electrophotographic mechanisms.

5. Claims 2, 4, 9, 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Williams et al. patent as applied to claims 1 and 19 above, and further in view of Japanese Publication No. 61-124459. The Williams et al. patent discloses most of the limitations of claims 2, 4 and 24, but does not specifically show that the plurality of media carriers include belts.

Regarding claims 2, 4 and 24, Fig. 4 of the Williams et al. patent shows first and second media carriers (114 and 116) for moving a print media (11) in a linear direction,

with the first media carrier (116) being located between the second media carrier (114) and the registration wall (near 132). The first and second media carriers (114 and 116) can be operated at different speeds to align a sheet that is conveyed via the fist and second media carriers. However, the Williams et al. patent does not specifically show that such media carriers include a plurality of belts as claimed.

Japanese Publication No. 61-124459 discloses that it is well known to provide a media registration mechanism with first and second media carriers that are first and second belts (53 and 54) which can be operated at different speeds to align a sheet that is conveyed via the first and second belts (53 and 54). It would have been obvious to one of ordinary skill in the art at the time of the invention, to replace the first and second media carriers (114 and 116) of the Williams et al. apparatus with first and second belts, since such modification merely replaces one well known media carrier arrangement with another equivalent media carrier arrangement that performs the same function, as shown in Japanese Publication No. 61-124459. Replacing the first and second media carriers of Williams et al. with first and second belts, according to the arrangement shown in the Williams et al. patent, will result in the belts being arranged such that one of the belts (first belt) is positioned between a second one of the belts (second belt) and the registration wall (near 132).

Regarding claims 9 and 15, the Williams et al. patent shows that the first and second media carriers (114 and 116) are driven at different speeds (V_1 and V_2, respectively), but does not specifically show the first and second media carriers are driven by two different motors.

Japanese Publication No. 61-124459 shows that it is well known to provide a media registration device with first and second motors (M1 and M2) that operate first and second media carriers (53 and 54), respectively. These two motors allow the first and second media carriers to operate at different speeds to align a sheet that is conveyed by the first and second media carriers. See Fig. 2 and the English Abstract of Japanese Publication No. 61-124459. It would have been obvious to one of ordinary skill in the art at the time of the invention, to provide the Williams et al. apparatus with first and second motors to individually control the first and second media carriers (114 and 116) of Williams et al., so that such first and second media carriers can properly align a sheet conveyed by the first and second media carriers, as taught by Japanese Publication No. 61-124459.

6. Claims 6, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Williams et al. patent as applied to claims 5, 10 and 13 above, and further in view of U.S. Patent No. 4,717,027 (Laure et al.). The Williams et al. patent discloses first and second carriers (114 and 116) that are inherently driven by a drive means at different speeds (V_1 and V_2, respectively), to rotatably convey a sheet into alignment with a registration wall (near 132), but the Williams et al. patent does not show that the drive means for the first and second carriers (114 and 116) has a drive shaft and belt arrangement as set forth in claims 6-8, 11 and 14.

The Laure et al. patent shows that it is well known to provide a registration apparatus with a motor (35) that is coupled to a drive shaft (33) via drive transmitting means (36), in which the drive shaft (33) includes a first pulley (38) having a first

diameter and a second pulley (37) having a second diameter that is greater than the first diameter. Also, a first media carrier (i.e., a first belt 32) is in driving engagement with the first pulley (38) and a second media carrier (i.e., a second belt 31) is in driving engagement with the second pulley (37). See, e.g., Fig. 9. The Laure et al. patent solves the same problem that the Williams et al. patent solves, in that the different diameter pulleys on the Laure et al. apparatus cause the different media carriers (i.e., belts 31 and 32) to move at different speeds. See column 6, lines 45-58. This differential speed between the belts 31 and 32 causes articles that are conveyed on the belts 31 and 32 to be rotated into longitudinal alignment. See, e.g., column 7, lines 14-20. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention, to replace the conveying structure of the Williams et al. apparatus with a belt conveying structure, because this merely involves replacement of one well known conveying structure with another well known conveying structure that solves the same problem (i.e., longitudinal alignment of conveyed articles).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on (571) 272-6944. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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